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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/934,156	08/21/2001	David Roth Rigney		7387

7590 01/08/2004  
David R. Rigney  
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EXAMINER

LY, CHEYNE D

ART UNIT PAPER NUMBER

1631

DATE MAILED: 01/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

80-14

**Office Action Summary**

Application No.

09/934,156

Applicant(s)

RIGNEY, DAVID ROTH

Examiner

Cheyne D Ly

Art Unit

1631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 2-6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-6 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 12/01.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Applicant's election Group I, claim 1, filed October 20, 2003, is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claim 1 is examined on the merits.

### **OBJECTIONS**

3. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code (page 17, line 7 and page 18, line 14). Applicant(s) is/are required to delete the embedded hyperlink and/or other form of browser-executable code, or inactivate the hyperlink. See MPEP § 608.01.

### **CLAIM REJECTIONS - 35 USC § 103**

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Andrade et al. (1999) taken with McCallum (1998).
6. Andrade et al. discloses a system, GeneQuiz, for automated genome sequence analysis and annotation wherein a Web-based browser provides views of results, and links to biological databases (Abstract etc.) such as GenBank (page 396, column 2, Database Quality §) and PROSITE (Table 1).

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7. The system of Andrade et al. has been demonstrated with several gene sets of several genomes, which identify a new function, a new family, and a new superfamily (page 403, column 1, New Findings §). Further, Andrade et al. discloses improvements with said system to cluster database sequences into families with pre-processed functional annotation (page 409, column 1, 42-45), as in instant steps (a) and (b).
8. Documents by Benson et al. and Bairoch et al. are not being used as prior art but only to expand on the above cited disclosure of GenBank and PROSITE. Benson et al. discloses ENTREZ, which is a database retrieval system for access to DNA, protein sequence data, and related MEDLINE references (page 4-5, The ENTREZ system, and Figure 3). Bairoch et al. discloses PROSITE provides documents directed to known protein families (Abstract etc. and pages 218-219), as in instant steps (c) and (d).
9. GeneQuiz performs a lexical analysis of database annotations and decision criteria for functional assignments (text classification) (Abstract etc.). GeneQuiz performs a general functional class analysis based on the generation of a dictionary that associates keywords characteristics of a sequence with a set of functional class (set of sequences). From a training set, keywords are extracted and each is scored by the numbers times that appears in a functional class (weighting) and assignment of a new sequence to a class is by look-up of the keywords for that sequence in the dictionary to determine the most frequently associated class. GeneQuiz provides a means of sorting via the GQreason module by reliability values and categories (page 398, column 2, 21-25, and Table 5) and storing (page 393, column 1, lines 14-17), as in instant steps (e) and (f).

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10. However, Andrade et al. does disclose the limitation of word weigh-setting methods implemented by the computer program Rainbow.

11. McCallum discloses a program, Rainbow, for performing text and document classification (Rainbow, pages 1-11), as in instant step (e).

12. An artisan of ordinary skill in the art at the time of the instant invention would have been motivated by Andrade et al. to improve GeneQuiz to provide better sensitivity during searches and an increase in speed and accuracy (page 409, column 1, 42-51); therefor, make the automated genome sequence analysis and annotation system wherein the text and document classification is performed by Rainbow as taught be McCallum. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to make an automated genome sequence analysis and annotation system to have the computer program, Rainbow, to perform the text and document classification, as taught be Andrade and McCallum.

### **CONCLUSION**

13. NO CLAIM IS ALLOWED.

14. Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993) (see 37 CFR § 1.6(d)). The CM1 Fax Center number is (703) 872-9306.

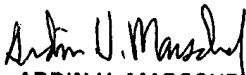
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15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Dune Ly, whose telephone number is (703) 308-3880. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

16. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, Ph.D., can be reached on (703) 308-4028.

17. Any inquiry of a general nature or relating to the status of this application should be directed to Legal Instruments Examiner, Tina Plunkett, whose telephone number is (703) 305-3524 or to the Technical Center receptionist whose telephone number is (703) 308-0196.

C. Dune Ly  
12/29/03

  
ARDIN H. MARSCHEL  
PRIMARY EXAMINER